

Title 153 - STATE FIRE MARSHAL

Chapter 14 - STORAGE AND HANDLING OF ANHYDROUS AMMONIA

001. National standard adopted by reference is the American National Standard Institute's K-61.1 - 1989 standard, Safety Requirements for the Storage and Handling of Anhydrous Ammonia, with amendments.

001.01. Additions and deletions to the national standard as adopted are attached to this chapter.

001.02. A copy of the ANSI standard is available for review at the office of the State Fire Marshal, 246 S. 14th, Lincoln, NE and at the office of the Secretary of State, Division of Regulations, State Capitol, Lincoln, NE.

AMENDMENTS TO ANSI K61.1 - 1989

These amended sections will replace the sections found in the 1989 national standard.

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3.1 DELETE

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3.4.1.1 Two full face gas masks, each with one spare ammonia canister, or two high visibility full head hoods, each with a minimum of a five minute pressurized air supply, in a readily accessible location for use in ammonia concentrations less than the IDLH. See 2.19.

3.4.1.5 Easily accessible emergency shower and a plumbed eyewash unit or in lieu of these, at least 100 gallons of clean water in an open top container.

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5.3.5 Container storage areas shall be accessible to emergency vehicles and personnel. Excess equipment shall not be stored in container area in order to provide access at all times.

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5.5.12 Quick opening (1/4 turn) valves shall not be used on transfer lines.

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5.8.11 A hydrostatic relief valve shall be installed in each section of piping (including hose) in which liquid ammonia can be isolated between shut-off valves to relieve the pressure which could develop from the trapped liquid.

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5.10.8.1 All stationary storage installations retrofitted or installed after

March 1, 1992 shall have an approved emergency shut-off valve installed in the fixed piping of the transfer system within 5 lineal feet (1.5 m) of where the hose or swivel piping is attached to the fixed piping. Retrofitting shall not include normal repairs or maintenance. This requirement does not apply to a line feeding a fixed process system. The emergency shut-off valve shall be installed in the facility piping so that any break will occur on the side of the hose or swivel connection.

- 5.10.10 Anhydrous ammonia shall be vented into an adequate supply of water. For this purpose, an adequate supply of water means ten gallons of water for each gallon of liquid ammonia or fraction thereof which is contained in the hose or vessel to be vented. Any aqueous ammonia solution resulting from the venting process shall be disposed of safely and properly.

NOTE: Ammonia vapor may be flared off when appropriate equipment is used to not allow ammonia vapor to escape unchecked into the atmosphere. This section does not apply to venting of a coupling between transfer hose and nurse tank or applicator or venting of vapor through 85% bleeder valve when loading a nurse tank of applicator.

- 5.10.10.1 Anhydrous ammonia shall not be vented into the air. Each transport truck unloading point at an anhydrous ammonia storage facility shall have a valve for venting purposes installed in the piping at or near the point where the piping and hose from the transport truck are connected. Anhydrous ammonia from any transport truck hose shall be vented into an adequate supply of water. For this purpose, an adequate supply of water means ten gallons of water for each gallon of liquid ammonia or fraction thereof which could be contained in the hose. Any aqueous solution resulting from the venting process shall be disposed of safely and properly.

- 5.10.11 All anhydrous ammonia storage locations shall have a permanent working platform installed at each nurse tank or applicator loading location. The working platform shall be designed to allow for connecting and disconnecting of transfer hoses without standing on equipment being loaded.

NOTE: This section does not apply to nurse tanks or applicators with a working surface designed for loading

purposes.

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- 9.7.3 A cargo tank container of greater than 3,500 gallons water capacity shall be unloaded only at approved permanent storage locations meeting the requirements of 3.4.1 and 5.10.8. A cargo tank shall only be unloaded into a container capable of holding the entire load.

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- 11.3.9 DELETE
- 11.5.2 All farm wagons shall be securely attached to the vehicle drawing them by means of drawbars supplemented by suitable hitch pins and safety chains which meet the requirements of ASAE S338.1, Safety Chain for Towed Equipment (28). A suitable hitch pin shall mean a pin which is secured by a safety latch.
- 11.5.3 A farm wagon shall be constructed so that it will follow substantially in the path of the towing vehicle and will prevent the towed farm wagon from whipping or swerving dangerously from side to side. No more than two farm wagons shall be towed by the same towing vehicle.
- 11.6.1 (1) DELETE

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- 11.6.2.2 Decals depicting instructions for quick couplers shall be placed on the nurse tank or on the tool bar.